

## OFFICIAL AMENDMENT

Application 09/925,059

November 16, 2005

Reply to Office Action of November 02, 2005

## OFFICIAL AMENDMENT

**AMENDMENT TO THE SPECIFICATION**

Please amend the paragraph starting at page 5, column 24 with the following:

~~A beam combiner~~ A combiner is arranged to optically/electronically combine the first and second outputs into a fused image and display the first output, the second output, or the fused output into an eyepiece/display.

Please amend the paragraph starting at page 6, column 16 with the following:

Likewise, the long wave infrared sensor has a second electrical output and a converted second optical output, the second electrical and optical outputs each representing an image of the radiation passing through the aperture filtered into the long wave infrared spectral range. ~~A beam combiner~~ A combiner optically/electronically combines the first and second optical/electronic outputs into an optically/electronically fused image providing a fused optical/electronic output. An eyepiece/display allows selective viewing of the first optical/electronic output, the second optical/electronic output, or the fused optical/electronic output.

Please amend the paragraph starting at page 16, column 21 with the following:

The use of lenses 115, 117, 123, and 127 allow for optically correcting aberrations and scaling images so that correct overlap of images can be achieved. ~~Because After the common lens 124a,~~ the NIR and LWIR signals are processed independently through lenses 115 and 117 respectively, thus different materials can be used to correct aberrations within the limited bandwidths. That is, instead of attempting to correct aberrations across the entire 0.48 to 12  $\mu$  waveband, ~~entire 0.40  $\mu$ m to 12  $\mu$ m waveband by lens 124a alone,~~ only the aberrations in the 0.48  $\mu$  to 0.9  $\mu$  waveband the 0.4  $\mu$ m to 1.1  $\mu$ m waveband are corrected by lens 124a and lens 115 for the NIR sensor 116, and only aberrations in the 8  $\mu$  to 12  $\mu$  waveband the 8  $\mu$ m to 12  $\mu$ m waveband are corrected by lens 124a and lens 117 for the LWIR sensor 118. This increases

OFFICIAL AMENDMENT

Application 09/925,059

November 16, 2005

Reply to Office Action of November 02, 2005

OFFICIAL AMENDMENT

flexibility in selecting suitable materials and correcting aberrations. Further, the LWIR radiation that enters the LWIR sensor 118 may be converted to an electronic signal before being output as a visible image. This allows the use of signal processing and conditioning. For example, the image may be scaled, resolution of the image may be adjusted, and the signal may be filtered or otherwise manipulated.